

**TRACKING OPERATING SYSTEM PROCESS AND THREAD EXECUTION
AND VIRTUAL MACHINE EXECUTION IN HARDWARE OR IN A VIRTUAL
MACHINE MONITOR**

5

RELATED APPLICATIONS

This application is related to U.S. Patent application serial number 09/541,444

titled REAL-TIME SCHEDULING OF VIRTUAL MACHINES, filed on March 31, 2000,

STILL PENDING,
and U.S. Patent application serial number 09/752,134 titled NEW PROCESSOR MODE

10 FOR LIMITING THE OPERATION OF GUEST SOFTWARE RUNNING ON A

VIRTUAL MACHINE SUPPORTED BY A VIRTUAL MACHINE MONITOR, filed on

STILL PENDING
December 27, 2000, both of which are assigned to the assignee of the present application.

FIELD OF THE INVENTION

15 This invention relates generally to virtual machine environments, and more particularly to scheduling virtual machines within those environments.

BACKGROUND OF THE INVENTION

An Operating System (OS) is a software program that controls physical computer
20 hardware (e.g., a processor, memory, and disk and CD-ROM drives) and presents application programs with a unified set of abstract services (e.g., a file system). Modern OSs typically multi-task among several application programs, each of which executes in a separate process, and many enable application programs to multi-task among several "threads" that share the same process address space.

25 Modern processors frequently have "performance counters," software-configurable registers that count occurrences of various performance "events." Typical events include